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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/131,744 | 08/10/1998 | NORIBUMI KOITABASHI | 884.2742 | 8265 |

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NEW YORK, NY 10112

EXAMINER

GRENDZYNSKI, MICHAEL E

| ART UNIT | PAPER NUMBER |
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1774

26

DATE MAILED: 09/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/131,744

Applicant(s)

KOITABASHI ET AL.

Examin r

Michael E. Grendzynski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 2, 3, 5, 8, 9/8, 10 and 14-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-16 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Election/Restrictions***

1. Applicant's election with traverse of Group I species (a) (Claims 1, 4, 6, 7 and 9) in Paper No. 25 is acknowledged. The traversal is on the ground(s) that all claims could be searched without undue effort. This is not found persuasive because, as made of record, the inventions are distinct and the search required for Group I is not required for Group II. Restriction for examination purposes as indicated is proper. With regard to the species requirement, it appears that applicants argue that the species are not patentably distinct. If such is the case, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or *clearly admit on the record* that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, *the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention*. The requirement is still deemed proper and is therefore made FINAL.

2. Claims 14-16, directed to an invention that is independent or distinct from the invention originally claimed because these claims are directed to patentably distinct species of the claimed invention:

- a. A recording method comprising the steps of (1) ejecting onto a recording material ink having a Ka value of a first value and (2) applying a processing liquid thereto having a second Ka value larger than the first value after a rapid swell point t_s passes after penetration of the ink into the medium, wherein the ink and the processing liquid have opposite polarities (claim 14)
- b. A recording method comprising the steps of (1) ejecting onto a recording material ink having a Ka value of a first value and (2) applying a processing liquid thereto having a second Ka value larger than the first value after a rapid swell point t_s passes after penetration of the ink into the medium, wherein a concentration of a surface active agent in the processing liquid is not less

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than the critical micelle concentration of the surface active agent in pure water (claims 15 and 16).

c. A recording method comprising the steps of (1) ejecting onto a recording material ink having a K_a value of a first value and (2) applying a processing liquid thereto having a second K_a value larger than the first value after a rapid swell point t_s passes after penetration of the ink into the medium, wherein a concentration of a surface active agent in the ink is less than the critical micelle concentration of the surface active agent in pure water (claim 16).

3. Since applicant has received an action for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 14-16 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer.

A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1 and 9 are rejected under the judicially created doctrine of double patenting over claims 16 and 35 of U.S. Patent No. 6,379,000 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: Both the instant application and the '000 patent claim a process whereby an ink is placed on a receiving medium and is then printed with a processing liquid, wherein the K_a of the ink is lower than the K_a of the processing liquid.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

6. Claims 1, 4, 6, 7, 9 and 11-13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 and 6-31 of copending Application No. 09/131,736. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would be obvious to one of ordinary skill in the art to choose a first ink having a K_a of $1 \text{ ml/m}^2 \text{ msec}^{-1/2}$ and a second ink having a K_a of $5 \text{ ml/m}^2 \text{ msec}^{-1/2}$, thus meeting the limitations of the instant claims. The use of the open-ended transition term comprising, moreover, permits *any* colorant to exist in the processing liquid.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Specification

7. The use of the trademark Acetylenol® has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 4, 7, 9 and 11-13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Koike (US 5608438). *See* Abstract. The use of the open-ended transition term “comprising” does not exclude a colorant from existing in the processing liquid.

With regard to claim 4, Koike discloses that a heating step is carried out continuously using a heater located on the recording device. *See* col. 9, ll 25-30.

With regard to claim 7, *see* Example 1 and FIG. 6 (disclosing the ejection of a black ink having a first Ka value, a cyan ink having a higher Ka value, and an additional ink).

With regard to claim 9, *see* col. 1, ll 14-17.

With regard to claim 11, Koike discloses a Ka value for its second ink within applicants' claimed range. *See* Abstract.

With regard to claims 12-13, Koike discloses a Ka value for its first ink within applicants claimed range.

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10. Claims 1, 7, 9 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Hirose (US 591514). Applicants claim a recording method comprising the steps of (1) ejecting onto a recording material ink having a K_a value of a first value and (2) applying a processing liquid thereto having a second K_a value larger than the first value after a rapid swell point t_s passes after penetration of the ink into the medium. Yamamoto discloses an ink jet recording process comprising the steps of (1) ejecting a first ink having a first surface tension onto a recording substrate and (2) ejecting a color ink including a second ink which is rendered insoluble by the first ink when mixed. *See* Abstract. The first ink is equivalent to applicants' ink having a K_a of a first value. All inks, inherently, possess a K_a value with respect to an absorbing surface. In its examples, Yamamoto discloses an embodiment where the first ink does not comprise any Acetylenol®. *See* Example 3. Consequently, this would meet applicants' definition of a topping-type ink (i.e., an ink having a K_a value of $-1.0 \text{ ml/m}^2 \text{ msec}^{-1/2}$). The second ink, moreover, is equivalent to applicants' processing liquid. It comprises Acetylenol® in amounts equivalent to applicants' semi-penetrative ink (i.e., a liquid having a K_a value of $1.0\text{-}5.0 \text{ ml/m}^2 \text{ msec}^{-1/2}$). *See* Table 1. The use of the open-ended transition term "comprising," moreover, does not exclude a colorant from existing in the processing liquid. The first ink was printed on the second ink. *See* p 13, l 35-39. The limitations of the claims, then, are met by the disclosure of the reference.

With regard to claim 7, a K_a value of $-1.0 \text{ ml/m}^2 \text{ msec}^{-1/2}$ meets applicants claimed value of not more than $3 \text{ ml/m}^2 \text{ msec}^{-1/2}$.

With regard to claim 9, *see* p 2, ll 12-15.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shioya (EP 726148) in view of both Kimura (US 5955515) and Koike (US 5614931). Shioya discloses a process whereby ink is ejected onto a recording medium, and then a processing liquid is ejected onto the ink. *See* p 7, ll 8-12. With regard to the claimed Ka values, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. Diffusion values are a conventional concern in the art, for they control such properties as the feathering and bleeding of the liquid. *See* Kimura at col. 3, l 40 through col. 4, l 26 and Koike at col. 1, ll 16-57. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215. To date, this burden has not been sustained.

With specific regard to claim 6, Shioya discloses its ink comprises a pigment. *See* p 9, ll 40-49.

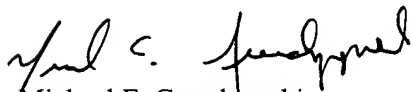
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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael E. Grendzynski whose telephone number is 703-305-0593. The examiner can normally be reached on weekdays, from 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 703-308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2351.


Michael E. Grendzynski
Assistant Examiner
September 8, 2002



BRUCE H. HESS
PRIMARY EXAMINER